

SWOC ANALYSIS OF EXTENSION PERSONNEL AT THE AGRICULTURAL TECHNOLOGY MANAGEMENT AGENCY (ATMA) IN MADURAI DISTRICT OF TAMIL NADU

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ABSTRACT

Agricultural Technology Management Agency (ATMA) is an autonomous decentralised registered body which aids in dissemination of technology and sustainable agriculture development at district level. As per the department of the Ministry of Agriculture and Farmer's Welfare, the Scheme is under implementation in 652 districts of 29 states and 3 Union Territories of the country. The scheme aims to make the latest agriculture technologies available to farmers through various activities such as research-extension linkages, innovative technology dissemination, demonstrations, training, farm school etc. ATMA is an important milestone in strengthening the existing extension system and hence it is imperative to analyse its strengths and weakness for effective execution of duties and provide suggestions to improve the overall quality of the scheme. Hence, an attempt was made to analyse the strength, weakness, opportunities and challenges of ATMA in Madurai District of Tamil Nadu among the extension personnel (officials) working under the scheme. Purposive sampling technique was used for the study. The results revealed that majority of the respondents (98.33%) had cited dissemination of new technologies to farmers on time, as the major strength; whereas 95 per cent of them cited change in Block Technology Managers and Assistant Technology Managers, as the foremost weakness in ATMA. Obtaining location specific needs were cited as the greatest opportunity in ATMA by 96.66 per cent of the respondent officials, while 95 per cent of the respondents stated that lack of permanent staff and developing rapport with the farmers as the major challenge.

KEYWORDS: ATMA, SWOC, ATMA Officials & Madurai

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INTRODUCTION

Agricultural Technology Management Agency (ATMA) is a registered society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district level. It was introduced as a pilot programme during the year 1998-2003 in 28 districts (DAC, 2005). ATMA is one of the existing agricultural extension systems in India and was pilot tested under the Innovations in Technology Dissemination (ITD) component of the National Agricultural Technology Project (NATP) funded by the World Bank. Consequently, it was revamped, expanded and strengthened comprehensively in the year 2010. It uses innovative functionary called "farmer friend" to deal with farmers at the village level. ATMA is a focal point for integrating research and extension activities and decentralizing day to- day management of agricultural extension system (Sahu et.al 2012). The release of funds were based on the Strategic Research and Extension Plan prepared by the state government,

who mostly considered the needs of the farmers while preparing the plan. The funding pattern is 90 per cent by the Central government and 10 per cent by the State government (NMAET 2014). Though there are many impact studies on ATMA, there are no or few studies on analysing the Strength, Weakness, Opportunities, and Challenges of the scheme. A SWOC analysis will help to identify and understand the key issues underlying the scheme. It is also a plausible tool in evaluating the internal potential and limitations of the scheme, the positive and negative factors that affect the outcome, predict the changing trends and help in the decision-making process. Hence, a study has been attempted to analyse the strength, weakness, opportunities, and challenges of ATMA.

METHODOLOGY

The study was conducted in Madurai district of Tamil Nadu. The district was purposively selected since ATMA has been functioning in 13 blocks of Madurai district. A sample size of 60 extension personnel (officials) working under ATMA were selected. The selected respondents include Joint Director of Agriculture, Assistant Director of Agriculture of all the blocks, Block Technology Managers and Assistant Technology Managers. A well-structured and pre-tested interview schedule was used for data collection. The strength, weakness, opportunities and challenges were studied on the perusal of various literature collected. The majority statements are as reported by ATMA officials. Percentage analysis was used in descriptive statistics for making simple comparisons. For calculating percentage, a frequency of the particular cell was multiplied by 100 and divided by the total number of respondents pertaining to the particular cell. The percentage was then corrected to two decimal places.

RESULTS AND DISCUSSIONS

The strength, weakness, opportunities and challenges of ATMA as perceived by the ATMA officials are as detailed below.

Table 1: Strengths of Agricultural Technology Management Agency

(n=60)

S. No	Strengths	Number	Percentage	Rank
1.	Dissemination of new technologies to farmers in time	59	98.33	I
2.	Regular conduct of trainings, demonstrations and exposure visits	58	96.66	II
3.	Conduct of periodical, seasonal and long trainings by the farm school to farmers during the critical stages of cropping season	50	83.33	VII
4.	Mobilisation of different farmer groups such as Women Groups, Farmer Cooperatives, Farmer Organisations and Commodity Organisations etc.	55	91.66	III
5.	Provision of incentives and awards to farmers and maintenance of records	36	60.00	XII
6.	Agriculture and allied sectors' involvement in farmers' problem solving	52	86.66	VI
7.	Empowerment of farm women through training in small group	53	88.33	V
8.	Fund allocation to various ATMA functions	48	80.00	IX
9.	Friendly relationship through face to face contact with farmers	47	78.33	X
10.	ATMA's role in increasing production, productivity and income of farmers	54	90.00	IV
11.	Bondage and trust between officials and farmers	49	81.66	VIII
12.	Organisation of exhibitions, kisan melas, fruits vegetable shows etc.	42	70.00	XI
13.	Role of ATMA in raising the standard of living of farmers	53	86.66	VI

(*Multiple Responses Obtained)

From **Table 1** it could be inferred that 98.33 per cent of the respondents had expressed that dissemination of new technologies to farmers in time, as the most important strength of ATMA. There are 13 blocks in Madurai district and each block has its own ATMA office with a Block Technology Manager and two Assistant Technology Managers. A pair of two villages in every block is regulated by a farmer's friend. The organisational set up of ATMA is very good in information dissemination which reaches the farmers in time.

Regular conduct of trainings, demonstrations and exposure visits by officials (96.66%) is another significant strength in ATMA followed by mobilisation of different farmer groups such as Women Groups, Farmer Cooperatives, Farmer Organisations and Commodity Organisations which works out 91.66 per cent ranked third. The above three strengths were found to be potential and mandatory which encouraged the farmers to take active participation in various ATMA activities.

ATMA's role in increasing production, productivity and income of farmers was considered as another major strength of ATMA officials (90.00%). The possible reason is the success stories, documented by the officials who represent the increase in production, productivity and income of farmers.

Empowerment of farm women through training in small groups is considered as an important strength by 88.33 per cent of the respondents. This might be the increased awareness about recent technologies, knowledge on nutritional aspects and homemade value addition to farm women who involved in ATMA trainings.

The involvement of Agriculture and allied sectors in farmer problem solving and role of ATMA in raising the standard of living of the farmers was felt by about 86.66 per cent of the respondents. The promising reasons are that the farm problems are easily solved with highly possible solutions which in turn increased the income and standard of living of the farmers.

About 83.33 per cent of the officials perceived that the conduct of periodical season long trainings by the Farm school for the benefit of the farmers during the critical stages of cropping season, as a vital strength of ATMA. This might be due to the conduct of interactive sessions once at least during each of the critical stages in a cropping season through farm schools.

Bondage and trust between officials and farmers is perceived as strength by about 81.66 per cent of officials. The reason behind this might be due to the cordial and active involvement of officials with farmers in ATMA.

Fund allocation to various ATMA functions was determined as strength (80.00%) among the officials of ATMA because without proper allocation, it is not possible to carry out the activities of ATMA.

The other important strengths in ATMA were friendly relationship through face to face contact with farmers (78.33%), Organisation of exhibitions, Kisan Melas, fruit and vegetable shows etc. (70.00%) and provision of incentives and awards to farmers and maintenance of records (60.00%).

Table 2: Weakness of Agricultural Technology Management Agency
(n=60)

S. No	Weakness	Number	Percentage	Rank
1.	Lack of staffs and inability to control the entire block	48	80.00	V
2.	Frequent changes in BTM and ATM	57	95.00	I
3.	Lack of job security for BTM and ATM	56	93.33	II
4.	Delayed approval and release of funds	50	83.33	IV
5.	ATMA office location	43	71.66	VII
6.	No separate computer operators at block level, so both field and office work are maintained by BTM and ATM	40	66.66	IX
7.	No prior information for work plan	55	91.66	III
8.	The ATMA functionaries involved in schemes other than ATMA	42	70.00	VIII
9.	The block level functionaries have no delegation of authority	38	63.33	X
10.	Red tapism	45	75.00	VI
11.	No separate allowance for daily transport for ATMA officials	37	61.66	XI

(*Multiple Responses Obtained)

The identified weaknesses in ATMA, experienced by the officials are enumerated in **Table 2** which shows that 95 per cent of the officials feel that frequent changes in BTM and ATM are the major weakness followed by lack of job security for BTM and ATM (93.33%). The reason is that the BTM and ATM are not appointed permanently and they may be replaced every year, so no job security is found.

Another important weakness is that, there is no prior information for work plan (91.66%) and it may be due to the fact that majority of the activities of the ATMA are planned immediately due to several reasons like unavailability of resource persons for training, insufficient farmers to attend training because of their personal work etc.

Delayed approval and release of funds is expressed as a weakness by 83.33 per cent of officials. The promising reason might be, that ATMA is loaded with enormous activities like trainings, demonstrations, exposure visits, and farm schools etc. which are conducted on a regular basis, so funds are necessary for the smooth functioning of these activities.

Lack of staffs and unable to control the entire block was perceived as a weakness by 80 per cent of the officials because the officials ADA, BTM and ATM are responsible for the functioning of ATMA at the block level. Thus it may be difficult to manage the entire block.

Red tapism experienced is a weakness stated by 75 per cent of the officials followed by ATMA office location (71.66%). The reason might be that ATMA office is located under the department of agriculture.

The ATMA functionaries are engaged in schemes other than ATMA, this is perceived by 70 per cent of the officials. It is because that ATMA is bound to the department of agriculture so there may be a possibility that other schemes may interfere with the work of ATMA officials.

The other weaknesses perceived by ATMA officials is that there are no separate computer operators at block level, so both field and office work are dealt by BTM and ATM (66.66%). The next problem highlighted is that the block level functionaries have no delegation of authority (63.33%) and no separate allowance is available to the officials for daily transport (61.66%).

Table 3: Opportunities of Agricultural Technology Management Agency (n=60)

S. No	Opportunities	Number	Percentage	Rank
1.	Farmers obtain the location specific needs	58	96.66	I
2.	More number of farmers are benefitted within a shorter period of time	55	91.66	III
3.	New technologies reach the farmers in time	53	88.33	IV
4.	Improved employment opportunities to farmers	56	93.33	II
5.	Farmer-Scientist interaction is possible and farmers get viable technologies	49	81.66	VIII
6.	An opportunity to farmers to meet out various farming system innovations/success stories around the country	52	86.66	V
7.	Farmers are provided with rewards and incentives as a symbol of motivation	45	75.00	XI
8.	Convergence of agriculture and allied sectors makes it possible to make aware of various sectors and to promote additional income to farmers	50	83.33	VII
9.	ATMA has provided inputs, technical support, agro-processing and marketing services to farmers	46	76.66	X
10.	ATMA mobilised Farmer Interest Groups (FIGs) and Farmer Organisations (FOs) are a good opportunity to farmers	47	78.33	IX
11.	Empowerment of women farmers by additional income through trainings on food and nutritional security, value addition and livestock management etc.	51	85.00	VI
12.	Low cost technologies with high income	43	71.66	XII

(*Multiple Responses Obtained)

The opportunities of ATMA as perceived by the officials in the **Table 3** indicates that farmers obtain the location specific needs (96.66%) were expressed as the most important opportunity available at ATMA. The main function of ATMA is to disseminate timely and relevant location specific technologies to farmers. This might be the reason to select this as an opportunity.

Improved employment opportunities to farmers (93.33%) followed by the point that, more number of farmers are benefitted within a shorter period of time (91.66%) are perceived as an opportunity. The reason behind this is that all the villages in a block are facilitated by the full coverage of ATMA farmers at a shorter period of time which in turn contributed increased employment opportunities to the farmers.

Reach of new technologies was noticed as 88.33 per cent. As mentioned above the timely dissemination of technologies in ATMA is a great opportunity provided to farmers.

An opportunity for farmers to meet out various farming systems and innovations/success stories around the country was expressed by 86.66 per cent of the officials. Exposure visits are conducted during a maximum duration of 10days within the district, within the state and inter-state which provided a good opportunity for farmers to acquire knowledge about various farming systems throughout the country.

Empowerment of women farmers by additional income through trainings on food and nutritional security, value addition and livestock management etc were perceived by 85 per cent of the officials. Thus ATMA provides an excellent opportunity to farm women by motivating and encouraging them.

Convergence of agriculture and allied sectors makes it possible to generate awareness among various sectors and

to promote additional income to farmers were expressed by 83.33 per cent of the officials followed by the possibility of farmer-Scientist interaction. Farmers get viable technologies and it is expressed by 81.66 per cent of the officials. ATMA is the source of linkage between agriculture and allied sectors including horticulture, animal husbandry, dairying, fisheries and sericulture etc. Hence it is a great deal to farmers to earn additional income by adopting practicably viable technologies.

About 78.33 per cent of the officials perceived that ATMA mobilised Farmer Interest Groups (FIGs) and Farmer Organisations (FOs) are a good opportunity to farmers. ATMA mobilised groups serve as opportunity to farmers by improving their skill development and by providing support services.

The other important opportunities disseminated according the ATMA officials were providing inputs, technical support, agro-processing and marketing services to farmers (76.66%) followed by rewards and incentives as a symbol of motivation (75.00%) and low cost technologies with high income (71.66%) .

Table 4: Challenges of Agricultural Technology Management Agency
(n=60)

S. No	Challenges	Number	Percentage	Rank
1.	Delayed availability of funds	50	83.33	IV
2.	Management of funds is not easy	52	86.66	III
3.	Gathering of farmers for trainings, demonstrations or exposure visits is difficult	40	66.66	VII
4.	Arranging resource persons for training and demonstrations are challenging	42	70.00	VI
5.	Farmer's expectations to financial assistance could not be made possible	49	81.66	V
6.	Lack of priority to trainings by farmers due to their personal work	36	60.00	VIII
7.	No permanent staff are appointed, so friendly relationship could not be maintained with the farmers	57	95.00	I
8.	Arrangement of food and accommodation to farmers during exposure visits is difficult	53	88.33	II

(*Multiple Responses Obtained)

Identification of existing challenges in any programme is of crucial importance to develop methods and measures to adopt or mitigate the challenges. **Table 4** explains that 95 per cent of the officials expressed that no permanent staff are appointed, so inability to maintain friendly relationship with the farmers is a major challenge faced by them. As mentioned earlier there is always a change in officials which affect the existing relationship with the farmers.

Arrangement of food and accommodation to farmers during exposure visits is difficult (88.33%) and it is a very big challenge to the officials followed by fund management (86.66%). The funds should be allocated regularly for training, exposure visits, demonstrations etc. Even distribution of money to farmers is also challenging task experienced by the officials.

Delayed availability of funds was expressed by 83.33 per cent of the officials as a challenge in ATMA. Funds are required at the right time for the smooth functioning of any programme.

Farmer's expectations for financial assistance and failure to provide the same is felt as a challenge by 81.66 per cent of the officials and 70 per cent of the officials expressed that arranging resource persons for training and demonstrations is challenging. Different trainings dealing with different sectors are conducted regularly, hence arranging

About 66.66 per cent of the officials expressed that gathering of farmers for trainings, demonstrations or exposure visits is not only difficult but also a challenge. Lack of priority to attend trainings by farmers due to their personal work and other hindrances (60.00%) is another difficulty. The reasons might be the lack of awareness and interest among farmers besides the lack of prior information to farmers about trainings or demonstrations etc., which force them to leave their work unfinished.

CONCLUSIONS

Based on the study and its findings, it is evident that bottom up planning approach is the greatest strength in ATMA. However, the existing challenges such as inadequate staff, lack of permanent staff members act as major hindrances. Hence, rectifying the above set discrepancies will improve job security, efficiency, accountability and responsibility among the staff. Furthermore, there is lack of awareness among farmers about the functioning of ATMA and its potential benefits to their development and hence, officials should be motivated towards providing periodical training and create awareness regarding the same. The officials can get the help of Non-governmental organisations or private organisations in mobilising the farmers. Encouraging private partnerships and timely allocation of funds are some of the possible solutions that could strengthen the system, which thereby increases the effectiveness of the scheme.

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